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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 March 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,12,14-25,29,31-35,37-39,41-43 and 46-49* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 12, 14-25, 29, 31-35, 37-39, 41-43 and 46-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to the amendment filed 7 March 2008.

2.   Claims 1-8, 12, 14-25, 29, 31-35, 37-39, 41-43 and 46-49 are pending in the

current application and claims 9-11, 13, 26-28, 30, 36, 40, 44 and 45 have been

canceled. Claims 1, 18, 35, 39, 42 and 49 are independent. In the amendment filed 7

March 2008, claims 1, 7, 12, 14, 18, 24, 29, 31, 35, 37-39, 42 and 43 are amended and

claim 49 is new This action is made Final.

Claim Objections

3.   Claims 39 and 43 are objected to because of the following informalities:

4.   Claim 39 is directed towards a computer-readable medium which comprises a

processor. It is unclear how a computer-readable medium (e.g., disk) can include a

processor.

5.   Claim 43 is objected to because the claim recites the limitation "the

organizational format" in line 1. There is insufficient antecedent basis for this limitation

in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

7.   Claims 1 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. The examiner fails to find antecedent basis

for the limitation "a management application ... (a) communicates with the destination

system and that accesses **data identifiers that identify the data as directories, files,**

or qtrees."

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

9.   **Claims 39-41** are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

        Claim 39 is directed toward "a computer-readable medium including program

instructions" and is non-statutory because the computer-readable medium

encompasses subject matter and/or embodiments, which do not fall within a statutory

category. The meaning of "computer-readable medium" as disclosed in page 34, lines

23-25 of the specification covers non-statutory embodiments, which improperly include

transmission media.

        See, e.g., In re Nuitjen, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op.

at 18) "A transitory, propagating signal like Nuitjen's is not a process, machine,

manufacture, or composition of matter.' ... Thus, such a signal cannot be patentable

subject matter." Therefore, the claimed subject matter fails to fall within on of the four

statutory classes.

> According to MPEP 2106:
>
> The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.
>
> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

> Since **claims 40 and 41** are dependent on claim 39, the claims are rejected on

the same grounds as claim 39.

> To allow for compact prosecution, the examiner will apply prior art to these

claims as best understood, with the assumption that applicant will amend to overcome

the stated 101 rejections.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11.   **Claims 1, 2, 17-19, 34, 35, 38, 39, 42 and 46-49 are rejected under 35**

U.S.C. 102(e) as being anticipated by US PGPub 2004/0010487 to Prahlad et al

(hereafter Prahlad).

Referring to claim 1, Prahlad discloses a system for indexing and manipulating a set of backup data stored on a destination system interconnected with a source file system having source data from which the backup data is transmitted to the destination system (see abstract and [0051]) comprising:

a management application [snapshot manager] executed by a computer, where the management application (a) communicates with the destination system and that accesses data identifiers that identify data as directories, files, or qtrees [identifies the content, identifies the volumes involved ...] related to the backup data organized in a tree structure [directory frame which provides a hierarchical arrangement] and representing a plurality of persistent consistency point images (PCPIs) [snapshots] of the data, each with associated information related to creation time [date of creation] (see [0055], lines 10-19; [0061]; [0062]; [0066]; and Fig 6) (b) scans the plurality of PCPIs stored on the destination system to generate an index of directories, files, or qtrees, where each directory, file or qtree has one or more versions created at one or more different points in time (see [0055]; [0058]; [0061]; [0066]; Fig 6; [0067]; and Fig 7), and (c) organizes the data identifiers into a structure that enables the data to be displayed according to directory, file or qtree [indexing generally denotes associating snapshots with information that may be useful in managing snapshots; for example,

browsing enables a user to view available snapshots for a particular volume or

application data and information] (see [0055]; [0058]; [0061]; [0066]; Fig 6; [0067]; and

Fig 7); and

a user interface to select a directory, file, or qtree to view, where the

management application returns a list of only the selected directory, file, or qtree and

the one or more versions of the selected directory, file or qtree (see Fig 6; Fig 7; [0058];

lines 1-5; [0060]; [0066]; and [0068]).

Referring to claim 2, Prahlad discloses the system as set forth in claim 1 further

comprising a database that stores the data identifiers and rules for handling the data

identifiers for retrieval by the user interface and the management application (see

[0036], lines 4-7).

Referring to claim 17, Prahlad discloses the system as set forth in claim 1

further comprising, in the user interface, a screen that enables selected of the source

data to be listed as entries and to be transmitted as backup data to the destination

system at a time separate from a scheduled backup time (see [0049], lines 20-26).

Referring to claim 18, Prahlad discloses a method for indexing and

manipulating a set of backup data stored on a destination system interconnected with a

source file system having source data from which the backup data is transmitted to the

destination system (see abstract and [0051]) comprising:

communicating, by a management client [snapshot manager], with the

destination system and accessing data identifiers that identify data as directories, files,

or qtrees [identifies the content, identifies the volumes involved ...] related to the backup

data organized in a tree structure [directory frame which provides a hierarchical

arrangement] and representing a plurality of persistent consistency point images

(PCPIs) [snapshots] of the data, each with associated information related to creation

time [date of creation] (see [0055], lines 10-19; [0061]; [0062]; [0066]; and Fig 6);

scanning the plurality of PCPIs stored on the destination system to generate an

index of directories, files, or qtrees, where each directory, file or qtree has one or more

versions created at one or more different points in time (see [0055]; [0058]; [0061];

[0066]; Fig 6; [0067]; and Fig 7);

organizing the data identifiers into a structure that enables the data to be

displayed according to directory, file or qtree [indexing generally denotes associating

snapshots with information that may be useful in managing snapshots; for example,

browsing enables a user to view available snapshots for a particular volume or

application data and information] (see [0055]; [0058]; [0061]; [0066]; Fig 6; [0067]; and

Fig 7); and

selecting on a user interface a directory, file, or qtree to view, where the

management application returns a list of only the selected directory, file, or qtree and

the one or more versions of the selected directory, file or qtree (see Fig 6; Fig 7; [0058];

lines 1-5; [0060]; [0066]; and [0068]).

Referring to claim 19, Prahlad discloses the method as set forth in claim 18

further comprising a database that stores the data identifiers and rules for handling the

data identifiers for retrieval by the user interface and the management application (see

[0036], lines 4-7).

Referring to claim 34, Prahlad discloses the method as set forth in claim 18 further comprising, in the user interface, a screen that enables selected of the source data to be listed as entries and to be transmitted as backup data to the destination system at a time separate from a scheduled backup time (see [0049], lines 20-26).

Referring to claim 35, Prahlad discloses a method for managing backup of data from a source system to a destination system and restore of backup data, relative to source data, from the source system to the destination system (see [abstract and [0051]) comprising:

communicating, by a management application [snapshot manager], with each of the source system and the destination system and transmitting requests to read a data organization residing on each of the source system and the destination system to derive an index of directories, files, or qtrees for each of the source system and the destination system (see [0055], lines 10-19; [0061]; [0062]; [0066]; and Fig 6)

scanning the plurality of persistent consistency point images (PCPIs) [snapshots] stored on the destination system to generate an index of directories, files, or qtrees, where each directory, file or qtree has one or more versions created at one or more different points in time (see [0055]; [0058]; [0061]; [0066]; Fig 6; [0067]; and Fig 7);

selecting a directory, file, or qtree to view (see [0060]); and

displaying, with a user interface communicating with the management application, only the selected directory, file, or qtree related to active data on the source system derived from source system index related to active data and the selected directory, file, or qtree related to backup data on the destination system derived from

destination system index related to (PCPIs) [snapshots] transmitted from the source

data during backup operations (see Fig 6; Fig 7; [0058], lines 1-5; [0060]; [0066] and

[0068]).

Referring to claim 38, Prahlad discloses the method as set forth in claim 35

further comprising activating user interface buttons associated with entries of the

displayed selected information to conduct either of a backup operation and a restore

operation with respect to the entries (see Fig 7 and [0069]-[0071]).

Referring to claim 39, Prahlad discloses a computer-readable medium,

comprising:

a processor (see [0017]);

said computer-readable medium including program instructions executed on the

processor to manage backup of data from a source system to a destination system and

restore of backup data, relative to source data, from the source system to the

destination system (see [abstract and [0051]), the program instructions comprising:

communicating, by a management application [snapshot manager], with each of

the source system and the destination system and transmitting requests to read a data

organization residing on each of the source system and the destination system to derive

an index of directories, files, or qtrees for each of the source system and the destination

system (see [0055], lines 10-19; [0061]; [0062]; [0066]; and Fig 6);

scanning the plurality of PCPIs stored on the destination system to generate an

index of directories, files, or qtrees, where each directory, file or qtree has one or more

versions created at one or more different points in time (see [0055]; [0058]; [0061];

[0066]; Fig 6; [0067]; and Fig 7);

selecting a directory, file, or qtree to view (see [0060]); and

displaying, with a user interface communicating with the management

application, only the selected directory, file, or qtree related to active data on the source

system derived from source system index related to active data and the selected

directory, file, or qtree related to backup data on the destination system derived from

destination system index related to (PCPIs) [snapshots] transmitted from the source

data during backup operations (see Fig 6; Fig 7; [0058], lines 1-5; [0060]; [0066] and

[0068]).

Referring to claim 42, Prahlad discloses a system, comprising:

a source storage system that generates a plurality of persistent consistency point

images (PCPIs), and transfers the plurality of PCPIs and data to a destination storage

system (see [0051]; [0055]; [0061]; and [0066]);

the destination storage system executes a management client, where the

management client organizes the plurality of PCPIs and the data into an index using a

database to allow the plurality of PCPIs and the data to be displayed in a listing of

source data entries indexed by names of the directories, files or qtrees of the source

storage system, where each directory, file, or qtree and the one or more versions

created at one or more different points in time [date of creation] (see [0055], lines 10-19;

[0058]; [0061]; [0062]; [0066]; [0067]; and Fig 6); and

an interface to select a data entry for a directory, file, or qtree to view, and the

management application returns a list of only the selected directory, file, or qtree and

the one or more versions of the selected directory, file or qtree (see Fig 6; Fig 7; [0058];

lines 1-5; [0060]; [0066]; and [0068]).

   Referring to claim 46, Prahlad discloses the system of claim 42, wherein the

database stores the plurality of PCPIs and rules for handling the plurality of PCPIs for

retrieval by the interface and the management client (see [0036], lines 4-7).

   Referring to claim 47, Prahlad discloses the system of claim 42, wherein the

source storage system upon initialization sends a base PCPI and data to the destination

storage system (see [0036]).

   Referring to claim 48, Prahlad discloses the system of claim 42, further

comprising a scheduler that interfaces with the source storage system and performs

backup operations of transmitting backup data including one or more PCPIs and change

data from the source storage system to the destination storage system at a

predetermined time interval (see [0049]; Fig 6; and Fig 7).

   Referring to claim 49, Prahlad discloses a method comprising:

   transferring a plurality of persistent consistency point images (PCPIs) [snapshots]

from a source storage system to a destination storage system [the snapshot data is

passed to the snapshot manager 503] (see [0055], lines 10-19; [0061]; [0062]; [0066];

and Fig 6);

   scanning the plurality of PCPIs to create an index of data structures in a

database on the destination system, wherein each data structure is a file, directory, or

qtree, and each data structure has one or more versions created at one or more

different points in time (see [0055]; [0058]; [0061]; [0066]; Fig 6; [0067]; and Fig 7);

    selecting a data structure to view (see [0060]); and

    returning an entry for the selected data structure and entries for the one or more

versions of the selected data structure to allow a user to select a particular entry to

restore (see Fig 6; Fig 7; [0058], lines 1-5; [0060]; [0066] and [0068]).

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.   Claims 3-6, 20-23, 37 and 41 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US PGPub 2004/0010487 to Prahlad et al as applied

respectively to claims 2, 19, 35 and 39 above, and further in view of US Patent No

6,434,681 to Armangau (hereafter Armangau).

    Referring to claim 3, Prahlad discloses communication with the destination

storage system, however, Prahlad fails to explicitly disclose the further limitation of a

network data management protocol extension. Armangau discloses indexing snapshots

(see abstract), including the further limitation of in the destination storage system, a

network data management protocol (NDMP) extension, communicating with a storage

operating system of the destination storage system and providing NDMP based

communication between the management application and the storage operating system

(see column 9, line 46 – column 10, line 21 and column 17, lines 40-52) since NDMP is

a standard which facilitates the partitioning of the backup problem between backup

software vendors, server vendors, and network-attached storage vendors in such a way

as to minimize the amount of host software for backup.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the NDMP extension disclosed by Armangau to provide the

communication disclosed by Prahlad. One would have been motivated to do so since

NDMP is a standard, which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup (Armangau: see

column 1, lines 48-62).

Referring to claim 4, the combination of Prahlad and Armangau (hereafter

Prahlad/Armangau) discloses the system as set forth in claim 3 further comprising a job

framework that organizes a plurality of backup operations and restore operations by the

management application and that communicates with the user interface so as to enable

a user to access information with respect to status of the backup operations and restore

operations organized by the job framework (Prahlad: see Fig 6 and 7).

Referring to claim 5, Prahlad/Armangau discloses the system as set forth in

claim 4 further comprising a scheduler that interfaces with the source system and that

performs the backup operations, transmitting the backup data from the source system to

the destination system at a predetermined time interval (Prahlad: see [0049]; Fig 6; and

Fig 7).

Referring to claim 6, Prahlad/Armangau discloses the system as set forth in

claim 5 wherein the user interface includes a screen that enables a user to set a desired

lag time after which failure to complete a scheduled backup operation caused an event

to occur (Prahlad: see [0049]; Fig 6; and Fig 7).

Referring to claim 20, Prahlad discloses communication with the destination

storage system, however, Prahlad fails to explicitly disclose the further limitation of a

network data management protocol extension. Armangau discloses indexing snapshots

(see abstract), including the further limitation of in the destination storage system, a

network data management protocol (NDMP) extension, communicating with a storage

operating system of the destination storage system and providing NDMP based

communication between the management application and the storage operating system

(see column 9, line 46 – column 10, line 21 and column 17, lines 40-52) since NDMP is

a standard which facilitates the partitioning of the backup problem between backup

software vendors, server vendors, and network-attached storage vendors in such a way

as to minimize the amount of host software for backup.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the NDMP extension disclosed by Armangau to provide the

communication disclosed by Prahlad. One would have been motivated to do so since

NDMP is a standard, which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup (Armangau: see

column 1, lines 48-62).

Referring to claim 21, Prahlad/Armangau discloses the method as set forth in

claim 20 further comprising a job framework that organizes a plurality of backup

operations and restore operations by the management application and that

communicates with the user interface so as to enable a user to access information with

respect to status of the backup operations and restore operations organized by the job

framework (Prahlad: see Fig 6 and 7).

Referring to claim 22, Prahlad/Armangau discloses the method as set forth in

claim 21 further comprising a scheduler that interfaces with the source system and that

performs the backup operations, transmitting the backup data from the source system to

the destination system at a predetermined time interval (Prahlad: see [0049]; Fig 6; and

Fig 7).

Referring to claim 23, Prahlad/Armangau discloses the method as set forth in

claim 22 wherein the user interface includes a screen that enables a user to set a

desired lag time after which failure to complete a scheduled backup operation caused

an event to occur (Prahlad: see [0049]; Fig 6; and Fig 7).

Referring to claim 37, Prahlad discloses communication with the destination

storage system, however, Prahlad fails to explicitly disclose the further limitation of a

network data management protocol extension. Armangau discloses indexing snapshots

(see abstract), including the further limitation wherein the steps of communicating and

transmitting include formatting information into a network data management protocol

(NDMP) (see column 9, line 46 – column 10, line 21 and column 17, lines 40-52) since

NDMP is a standard which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the NDMP extension disclosed by Armangau to provide the

communication disclosed by Prahlad. One would have been motivated to do so since

NDMP is a standard, which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup (Armangau: see

column 1, lines 48-62).

Referring to claim 41, Prahlad discloses communication with the destination

storage system, however, Prahlad fails to explicitly disclose the further limitation of a

network data management protocol extension. Armangau discloses indexing snapshots

(see abstract), including the further limitation wherein the steps of communicating and

transmitting include formatting information into a network data management protocol

(NDMP) (see column 9, line 46 – column 10, line 21 and column 17, lines 40-52) since

NDMP is a standard which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the NDMP extension disclosed by Armangau to provide the

communication disclosed by Prahlad. One would have been motivated to do so since

NDMP is a standard, which facilitates the partitioning of the backup problem between

backup software vendors, server vendors, and network-attached storage vendors in

such a way as to minimize the amount of host software for backup (Armangau: see

column 1, lines 48-62).

14.   **Claims 7, 8, 12-16, 24-33 and 43 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over US PGPub 2004/0010487 to Prahlad et al as applied

respectively to claims 1, 18 and 42 above, and further in view of US PGPub

2003/0131207 to Arakawa et al (hereafter Arakawa).

        Referring to claim 7, while Prahlad discloses a plurality of organizational

formats, Prahlad fails to explicitly disclose the further limitation wherein the user can

select (a) a listing of source data entries indexed by names of the source system and

(b) a listing of source data entries indexed by names of volumes of the destination

system in which the backup data from the source data resides. Arakawa discloses

storing snapshot management information (see abstract), including the further limitation

of wherein the user can select (a) a listing of source data entries indexed by names of

the source system and (b) a listing of source data entries indexed by names of volumes

of the destination system in which the backup data from the source data resides (see

Fig 11; and [0086]-[0088]).

        It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the information in the table of Arakawa with the information

collected by Prahlad when indexing the snapshots to display information about the
snapshots to the user. On would have been motivated to do so in order to increase
efficiency of selecting a snapshot by listing all relevant information.

Referring to claim 8, the combination of Prahlad and Arakawa (hereafter
Prahlad/Arakawa) discloses the system as set forth in claim 7 wherein each of the
entries of each listing includes a browse backups button that enables a user to view
backup data stored on the destination system that is associated respectively with each
of the entries (see [0066]; Fig 6; and Fig 7).

Referring to claim 12, Prahlad/Arakawa discloses the system as set forth in
claim 11 wherein each of the entries of each listing includes a restore button that
enables a user to view restorable backup data structures with respect to each of the
entries and to restore the backup data structures to the source data (see [0069] and Fig
7).

Referring to claim 14, Prahlad/Arakawa discloses the system as set forth in
claim 12 wherein each qtree includes qtree relationships with respect to other qtrees
within the source system (see [0066], lines 1-9).

Referring to claim 15, Prahlad/Arakawa discloses the system as set forth in
claim 14 wherein the user interface includes a command for destroying a qtree
relationship between the source data and a selected volume of the backup data in the
destination system (see [0066]; [0055], lines 17-19; [0069] and Fig 7).

Referring to claim 16, Prahlad/Arakawa discloses the system as set forth in
claim 15 wherein the management application is adapted to delete a respective qtree

associated with the qtree relationship on the destination system in response to

activation of the command for destroying (see [0066]; [0055], lines 17-19; [0069] and

Fig 7).

Referring to claim 24, while Prahlad discloses a plurality of organizational

formats, Prahlad fails to explicitly disclose the further limitation of selecting (a) a listing

of source data entries indexed by names of the source system and (b) a listing of

source data entries indexed by names of volumes of the destination system in which the

backup data from the source data resides.   Arakawa discloses storing snapshot

management information (see abstract), including the further limitation of selecting (a) a

listing of source data entries indexed by names of the source system and (b) a listing of

source data entries indexed by names of volumes of the destination system in which the

backup data from the source data resides (see Fig 11; and [0086]-[0088]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the information in the table of Arakawa with the information

collected by Prahlad when indexing the snapshots to display information about the

snapshots to the user. On would have been motivated to do so in order to increase

efficiency of selecting a snapshot by listing all relevant information.

Referring to claim 25, Prahlad/Arakawa discloses the method as set forth in

claim 24 wherein each of the entries of each listing includes a browse backups button

that enables a user to view backup data stored on the destination system that is

associated respectively with each of the entries (see [0066]; Fig 6; and Fig 7).

Referring to claim 29, Prahlad/Arakawa discloses the method as set forth in claim 24 wherein each of the entries of each listing includes a restore button that enables a user to view restorable backup data structures with respect to each of the entries and to restore the backup data structures to the source data (see [0069] and Fig 7).

Referring to claim 31, Prahlad/Arakawa discloses the method as set forth in claim 29 wherein each qtree includes qtree relationships with respect to other qtrees within the source system (see [0066], lines 1-9).

Referring to claim 32, Prahlad/Arakawa discloses the method as set forth in claim 31 wherein the user interface includes a command for destroying a qtree relationship between the source data and a selected volume of the backup data in the destination system (see [0066]; [0055], lines 17-19; [0069] and Fig 7).

Referring to claim 33, Prahlad/Arakawa discloses the method as set forth in claim 32 wherein the management application is adapted to delete a respective qtree associated with the qtree relationship on the destination system in response to activation of the command for destroying (see [0066]; [0055], lines 17-19; [0069] and Fig 7).

Referring to claim 43, while Prahlad discloses a plurality of organizational formats, Prahlad fails to explicitly disclose the further limitation wherein the desired organizational format includes at least each of (a) a listing of source data entries indexed by names of the source system and (b) a listing of source data entries indexed by names of volumes of the destination system in which the backup data from the

source data resides.   Arakawa discloses storing snapshot management information

(see abstract), including the further limitation of wherein the desired organizational

format includes at least each of (a) a listing of source data entries indexed by names of

the source system and (b) a listing of source data entries indexed by names of volumes

of the destination system in which the backup data from the source data resides (see

Fig 11; and [0086]-[0088]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the information in the table of Arakawa with the information

collected by Prahlad when indexing the snapshots to display information about the

snapshots to the user. On would have been motivated to do so in order to increase

efficiency of selecting a snapshot by listing all relevant information.

Response to Arguments

15.   Applicant's arguments filed 7 March 2008 have been fully considered but they

are not persuasive.

16.   Referring to applicants' arguments on page 12 of the Remarks regarding the 35

USC 101 rejection, the applicants state "Applicant has amended the claim to have the

computer readable medium executed on a processor. Therefore, there is hardware

performing the claimed instructions."

The examiner respectfully disagrees. As noted in the rejection on 12 December

2007, the computer-readable medium was directed towards nonstatutory subject matter,

such as transmission media. Therefore, it is necessary that the computer-readable

medium be limited to only statutory subject matter. The applicants amended the claim

to state that the computer-readable medium comprises a processor. This amendment

fails to overcome the rejection because it is unclear how it is possible for a computer

readable medium (e.g., disk) can comprise a processor.

17.   Referring to applicants arguments on pages 13-14 of the Remarks concerning

the 102 rejection of claims 1, 2, 7-19, 24-36 and 38-40, the applicants state "Applicant

respectfully urges that Prahlad does not disclose Applicant's claimed novel *scans the*

plurality of PCPIs stored on the destination system to generate an index of directories,

files, or qtrees, where each directory, file or qtree has one or more versions created at

one or more different points in time, and (c) organizes the data identifiers into a

structure that enables the data to be displayed according to directory, file or qtree and *a*

user interface to select a directory, file, or qtree to view, where the management

applications returns a list of only the selected directory, file, or qtree."

        The examiner respectfully disagrees.

        As stated in the rejection of the claims above, paragraphs [0055], [0058], [0061],

[0066], [0067], and figures 6 and 7 of Prahlad are considered to teach the limitation

"scans the plurality of PCPIs stored on the destination system to generate an index of

directories, files, or qtrees, where each directory, file or qtree has one or more versions

created at one or more different points in time". The snapshot manager indexes the

snapshot associating snapshot with information that may be useful in managing the

snapshots. The index of snapshots is considered to represent an index of files, and

therefore Prahlad is considered to teach the requirements of the limitation.

As stated in the rejection above, paragraphs [0055], [0058], [0061], [0066],

[0067], and figures 6 and 7 of Prahlad are considered to teach the limitation "a user

interface to select a directory, file, or qtree to view, where the management applications

returns a list of only the selected directory, file, or qtree." Prahlad discloses that the

snapshot manager 503 is accessible to a user with an appropriate user interface

screen. Furthermore, Prahlad states that browsing enables users to view information

for particular snapshots. Prahlad teaches the concept that when a particular volume is

selected, snapshots associated with that snapshot are selected.

18.   The rejection of claims 3-6, 20-23, 37 and 41 under 35 USC 103 are maintained

for the reasons stated above.

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- US PGPub 2005/0193026 titled "System and Method for Performing an

   Image Level Snapshot and for Restoring Partial Volume Data" to Prahlad et al

- US PGPub 2007/0250663 titled "Persistent Snapshot Methods" to Welsh et al

- US PGPub 2003/0167380 titled "Persistent Snapshot Management System"

   to Greene et al

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY LOVEL whose telephone number is (571)272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Cottingham/   Kimberly Lovel
Supervisory Patent Examiner, Art Unit 2167   Examiner
                                                    Art Unit 2167

3 July 2008
kml